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Bahram Ghaffarzadeh Kermani

Kermani 35

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CARLSON, GASKEY & OLDS, P.C./Alcatel-Lucent

400 W MAPLE RD

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OPSASNICK, MICHAEL N

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* BAHRAM GHAFARZADEH KERMANI

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Appeal 2009-014355  
Application 09/483,762  
Technology Center 2600

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Before ALLEN R. MacDONALD, ROBERT E. NAPPI,  
JASON V. MORGAN, *Administrative Patent Judges*.

MORGAN, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

### *Introduction*

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1 – 39. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

### *Invention*

The invention relates to the control of electronic devices from a remote location using a voice command remote control (Spec. 1). Claims 1 and 17 are directed to voice command remote control systems. Claim 20 is directed to a method of controlling at least one controlled device from a remote location.

### *Exemplary Claims*

1. A voice command remote control system comprising:  
a remote control device for controlling a *household appliance* controlled device comprising:

a transducer that converts sound of an audio voice command to an electrical signal; and

*a transmitter that transmits said electrical signal to a first controlled device, wherein said first controlled device comprises:*

*a recognition processor that converts said electrical signal to pattern data and compares said pattern data with a plurality of sets of stored pattern data to recognize said audio voice command as corresponding to one of the sets of the stored pattern data.*

(Emphases added).

4. The voice command remote control system of claim 3, further comprising a *recorder that records said electrical signal*.

(Emphasis added).

12. The voice command remote control system of claim 3, wherein said *first controlled device further comprises a transmitter for generating and transmitting a second electrical signal to a second controlled device*.

(Emphasis added).

*Evidence Examiner Relies Upon*

Kimura	US 5,199,080	Mar. 30, 1993
Ladden	US 5,855,003	Dec. 29, 1998
Puthuff	US 6,112,103	Aug. 29, 2000
		(filed Jul. 10, 1997)

*Examiner's Rejections*

The Examiner rejects claims 1 – 9 and 11 – 39 under 35 U.S.C. § 103(a) as being unpatentable over Kimura and Ladden (Ans. 3 – 7).

The Examiner rejects claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Kimura, Ladden, and Puthuff (Ans. 8).

ISSUES

1. Did the Examiner err in finding that Kimura and Ladden would have made obvious the recitations of claims 1, 2, and 11?

2. Did the Examiner err in finding that Kimura and Ladden would have taught or suggested a voice command remote control system comprising a recorder that records an electric signal converted from the sound of an audio voice command, as recited in claim 4?

3. Did the Examiner err in finding that Kimura and Ladden would have taught or suggested a first controlled device comprising a transmitter

for generating and transmitting a second electrical signal to a second controlled device, as recited in claim 12?

## ANALYSIS

### Issue 1

#### ***Claim 1***

Claim 1 discloses “a remote control device for controlling a household appliance . . . comprising . . . a transmitter that transmits said electrical signal to a first controlled device [that] comprises: a recognition processor that converts said electrical signal to pattern data.”

The Examiner finds that Kimura teaches a remote control device, having a recognition processor, for controlling a household appliance (Ans. 3). Unlike the claimed invention, Kimura transmits control signals instead of speech signals to the controlled device (*id.*). The Examiner relies on Ladden as teaching moving speech recognition from the remote control device to a local device (Ans. 4).

Appellant contends that “in Ladden the speech recognition software 209 is in the Base Station (BSS) 203 of a cellular telephone network, and not in any controlled device” (App. Br. 5). However, Appellant cannot show error in the Examiner’s rejection by attacking Ladden individually when the rejection is based on the combined teachings of Kimura and Ladden. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981). Kimura, not Ladden, teaches a household appliance controlled device, such as an audio visual device (Ans. 10; Kimura col. 1, ll. 5 – 9).

Appellant contends that “prior art must be from the same field of endeavor as the inventor or an analogous field” (App. Br. 6). Prior art is analogous if it “is from the same field of endeavor, regardless of the problem

addressed.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). The Examiner correctly shows that both Kimura and Ladden are analogous prior art because they are both in the field of endeavor of speech recognition (Ans. 10; Kimura Abstr.; Ladden Abstr.).

Appellant contends that Ladden teaches away from the claimed invention because Ladden places “speech recognition software in a location that essentially does not exist in Kimura or the present invention, i.e., in a base station of a cellular communication network” (App. Br. 6). However, performing speech recognition processing in a base station would not have discouraged or led away from performing speech processing in controlled devices. *See In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Whether speech recognition processing is performed in a base station or in a controlled device, the speech recognition processing is being performed outside the remote control device.

Appellant contends that the Examiner “has improperly used hindsight reconstruction” to reject the claimed invention (App. Br. 5). However, we are persuaded that the Examiner’s prima facie case of obviousness does not rely on *ex post* reasoning. *See KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 421 (2007). The Examiner finds that an artisan of ordinary skill would appreciate that performing speech recognition on a controlled device has advantages over performing speech recognition on a remote controlling device (Ans. 4 and 9). We agree with the Examiner because Ladden teaches coupling a Speech Recognition System directly to a network infrastructure (off of a mobile station) *to provide for enhanced capabilities* within a wireless communication system (Ladden col. 1, ll. 40 – 45; fig. 6). Therefore, the Examiner’s reasoning has a rational underpinning and is

based solely on knowledge that would have been available to an artisan of ordinary skill at the time of the invention.

Appellant further contends (1) that modifying Kimura using Ladden's teachings would render Kimura's remote control device incapable of performing the stated objects (Reply Br. 1 – 2); (2) such modification would change the principle of operation of Kimura (Reply Br. 2); and (3) Ladden provides motivation to optimize a codec with a wireless communication device for use with speech recognition, not for combining its teachings with Kimura (Reply Br. 3). Arguments in the Reply Brief that could have been presented in the Appeal Brief to rebut rejections made in the Final Office Action are waived and are not considered. *Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (informative decision) (“[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not.”). Furthermore, the object of Kimura is to enable a remote control device to control devices by way of voice commands (Kimura col. 1, ll. 5 – 9). The principle of operation is the use of standard pattern data to recognize voice commands (Kimura Abstr.). The object of Kimura would still be met, with the same principle of operation, by performing speech recognition on the controlled devices rather than on the remote control device, as taught by Ladden. This modification of Kimura would be nothing more than the combination of familiar elements according to known methods to yield predictable results. *See KSR Int'l*, 550 U.S. at 416.

For the above reasons, we agree with the Examiner that the claimed invention is obvious in light of Kimura and Ladden. Accordingly, we find that the Examiner did not err in rejecting claim 1 under 35 U.S.C. § 103(a).

Appellant provides no additional arguments with respect to claims 3, 10, 17 – 20, 25, and 37 – 39 (App. Br. 4 – 7). Appellant merely shows that independent claims 17 and 20 have similar recitations to the disputed recitations of claim 1 (App. Br. 7). Accordingly, for the reasons discussed above, we find that the Examiner did not err in rejecting claims 3, 10, 17 – 20, 25, and 37 – 39 under 35 U.S.C. § 103(a).

***Claim 2***

Claim 2 recites “wherein said first controlled device is one of a stereo set, television, cassette tape deck, video tape deck, compact disc player, digital video disc player, telephone answering device, and video cassette recorder.” Appellant contends that this recitation “even more clearly places it outside of the art of telecommunication networks of Ladden” (App. Br. 8). However, the Examiner correctly relies on Kimura, not Ladden, as teaching an audio visual device (Ans. 5; Kimura col. 1, ll. 5 – 9). We agree with the Examiner that the audio visual device of Kimura teaches or suggests at least one of the enumerated audio visual devices of claim 2. Accordingly, we find that the Examiner did not err in rejecting claim 2 under 35 U.S.C. § 103(a).

***Claim 11***

Claim 11 recites “a second controlled device having a recognition processor.” Appellant contends that Kimura figure 11, sub-block 23b (a memory for multiple speech recognition processors), is part of the remote control unit, not part of any controlled device (App. Br. 9). As discussed above, moving speech recognition processing out of the remote control device and into a controlled device would have been obvious in light of Kimura and Ladden. As the Examiner correctly points out, Kimura’s remote is designed to control more than one controlled device (Ans. 11; Kimura col.



1, ll. 5 – 7). Accordingly, moving speech recognition processing out of the remote control device and into multiple controlled devices (i.e., at least a first and second controlled device), would have been obvious in light of Kimura and Ladden. Accordingly, we find that the Examiner did not err in rejecting claim 11 under 35 U.S.C. § 103(a).

## **Issue 2**

Claim 4 recites “a recorder that records *said electrical signal*” (emphasis added). Claim 4 depends on claim 1, which recites “a transducer that converts sound of an audio voice command to *an electrical signal*” (emphasis added) and a controlled device comprising “a recognition processor that converts *said electrical signal* to pattern data” (emphasis added). As such, the broadest reasonable interpretation of claim 4 requires recording of an electric signal that (1) is converted from an audio voice command and (2) is distinct from pattern data.

The Examiner relies on Kimura’s memory 23A as teaching or suggesting recording of the claimed electrical signal (Ans. 5; Kimura fig. 6). Appellant contends that memory 23A is for storing pattern data for speech recognition, not for recording the claimed electrical signal (App. Br. 8). We agree with Appellant.

Kimura takes a voice command applied to a microphone, which produces an electrical signal output (Kimura col. 6, ll. 5 – 6). This electrical signal is processed to produce a signal E composed of 4-bit time-division digital data (Kimura col. 6, ll. 7 – 22; figs. 8(a) - (f)). The resulting time-division digital data is the standard pattern data (Kimura col. 7, ll. 18 – 19) that is stored in memory 23A (Kimura col. 5, ll. 12 – 14 and 16 – 20; figs. 5 and 6). Thus, Kimura teaches storing pattern data. However, the Examiner

does not present findings showing that Kimura and Ladden teach or suggest storing (i.e., recording) the electrical signal precursor to the pattern data.

Accordingly, we do not sustain the Examiner's rejection of claim 4 under 35 U.S.C. § 103(a).

Claims 5 – 9, 21 – 24, 35, and 36 contain the same or similar recitations to the disputed recitation of claim 4. Accordingly, for the same reasons given above, we do not sustain the Examiner's rejection of claims 5 – 9, 21 – 24, 35, and 36 under 35 U.S.C. § 103(a).

### **Issue 3**

Claim 12 recites “said first controlled device further comprises a transmitter for generating and transmitting a second electrical signal to a second controlled device.” The Examiner relies on Kimura, figure 11, sub-block 24 (an interface going to multiple controllers) as teaching this recitation (Ans. 7, 11). Appellant contend that this sub-block “is an interface unit and is in the remote control, not in any controlled device” (App. Br. 9 – 10).

We agree with Appellant. As discussed above, the Examiner has shown that Kimura and Ladden teach moving speech recognition from a remote control device into controlled devices. The resulting remote control device would transmit speech signals to multiple controlled devices. However, the Examiner does not present findings showing that having the first controlled device further generate and transmit a second electrical signal to a second controlled device (i.e., transmitting electrical data between controlled devices, not just from the remote control device to controlled devices) would have been obvious in light of Kimura and Ladden.

Accordingly, we do not sustain the Examiner's rejection of claim 12 under 35 U.S.C. § 103(a).

Claims 13 – 16 and 26 – 36 contain the same or similar recitations to the disputed recitation of claim 12. Accordingly, for the same reasons given above, we do not sustain the Examiner's rejection of claims 13 – 16 and 26 – 36 under 35 U.S.C. § 103(a).

### DECISION

We affirm the Examiner's decision rejecting claims 1 – 3, 10, 11, 17 – 20, 25, and 37 – 39.

We reverse the Examiner's decision rejecting claims 4 – 9, 12 – 16, 21 – 24, and 26 – 36.

In the event of further prosecution, we direct the Examiner attention to dependent claims 37 and 38. Claim 37 recites “the method of claim 1” and claim 38 recites “the method of claim 18.” However, neither claim 1 nor claim 18 recite a method. As such, we recommend that the Examiner ascertain whether claims 37 and 38 are indefinite under 35 U.S.C. § 112, second paragraph, as having terms lacking an antecedent basis.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

ELD